

Claims

1. A method for conditioning honey bees to search for a target odor at a search area comprising the steps of:

- a) moving at least one honey bee hive containing bees to a staging area;
- b) applying the target odor to the at least one hive;
- c) placing at least one bulk feeder comprising food and the target odor near the hive;
- d) reorienting the bees to the bulk feeders for a period of about 24 to about 48 hours;
- e) moving the at least one hive to the search area;
- f) positioning feeding/conditioning means proximate the at least one hive;
- g) feeding the bees at the feeding/conditioning means for about 24 hours; and
- h) alternating periods of feeding and periods of starvation to encourage the bees to forage and identify the target odor.

2. The method of claim 1, wherein said staging area is at least two miles from said search area.

3. The method of claim 1, wherein said bees are reoriented to said bulk feeders by methods selected from the group consisting of: making a food trail from an entrance of said at least one hive to said bulk feeding means; inserting a dish of food partially into the entrance of said at least one hive and moving it gradually toward said bulk feeding means; and marking said bulk feeding means with bright colors to mimic surrounding nectar sources and removing the marking after said bees discover said bulk feeding means.

4. The method of claim 1, wherein said at least one hive is moved to said search area at night.

5. The method of claim 1, wherein said feeding/conditioning means are positioned about two meters from said at least one hive in said search area.

6. The method of claim 1, wherein periods of starvation between periods of feeding are between about 15 minutes and about 120 minutes.

7. The method of claim 6, wherein said periods of starvation are about 30 minutes.

8. The method of claim 1, wherein said feeding/conditioning means comprise:
a base, wherein an upper surface of the base comprises a well to hold said food and a channel separate from the well to hold said target odor;
a screen covering the upper surface of the base; and
a ring disposed above the screen and removably attached to the base;
wherein the bees land on the screen and probe the food in the well.

9. The method of claim 8, wherein said base is a solid cylinder.

10. The method of claim 9, wherein said well is circular and proximate the center of said upper surface of said cylinder and said channel encircles said well.

11. The method of claims 10, wherein said base which is a solid cylinder is about 5 centimeters high and about 20 centimeters to about 30 centimeters in diameter, and said well is about 1.5 centimeters deep and said channel is about 1.5 centimeters wide and about 1.5 centimeters deep.

12. The method of claim 8, wherein said feeding/conditioning means further comprises an overflow tube protruding through said base into said well.

13. The method of claim 12, wherein said feeding/conditioning means further comprises an overflow collector.

14. The method of claim 13, wherein said feeding/conditioning means and said overflow collector together are not greater than about 10 centimeters high.

15. The method of claim 1, wherein said alternating periods of feeding and period of starvation are controlled by an automated feeding controller delivery means comprising:
a programmable timer capable of controlling at least one relay;
an overflow feedback unit to monitor the level of said food in said well; and
a pump.

16. Feeding/conditioning means for feeding and conditioning honey bees to a target odor comprising:

a base, wherein an upper surface of the base comprises a well to hold food and a channel separate from the well to hold said target odor;
a screen covering the upper surface of the base; and
a ring disposed above the screen and removably attached to the base;
wherein the bees land on the screen and probe the food in the well.

17. The feeding/conditioning means of claim 16, wherein said base is a solid cylinder.

18. The feeding/conditioning means of claim 17, wherein said well is circular and proximate the center of said upper surface of said cylinder and said channel encircles said well.

19. The feeding/conditioning means of claims 18, wherein said base which is a solid cylinder is about 5 centimeters high and about 20 centimeters to about 30 centimeters in diameter, and said well is about 1.5 centimeters deep and said channel is about 1.5 centimeters wide and about 1.5 centimeters deep.

20. The feeding/conditioning means of claim 16, wherein said feeding/conditioning means further comprises an overflow tube protruding through said base into said well.

21. The feeding/conditioning means of claim 20, wherein said feeding/conditioning means further comprises an overflow collector.

22. The feeding/conditioning means of claim 21, wherein said feeding/conditioning means and said overflow collector together are not greater than about 10 centimeters high.

23. The feeding/conditioning means of claim 16, further comprising an automated feeding controller delivery means comprising:

- a programmable timer capable of controlling at least one relay;
- an overflow feedback unit to monitor the level of said food in said well; and
- a pump.